

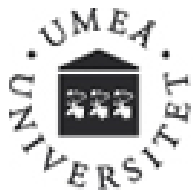
Scenarios in Mistra Arctic Sustainable Development (MASD)

Annika E Nilsson

Presentation at the Arctic scenarios workshop
20 May 2014, Vienna, Austria

Mistra Arctic Sustainable Development

- Focus on “New governance for sustainable development in the European Arctic”
- Funded by the Swedish Foundation for Strategic Environmental Research (Mistra)
- 30 Million SEK for 4 years (+ partners’ co-funding)
- Four partner organizations:



Umeå universitet



Mission

**To provide a nuanced understanding of the conditions
for sustainable development
in the European Arctic**

**with focus on the historical construction of resources, the
role of governance, and the local and regional impacts of
global trends**



Research questions and focus

- How have particular resource-based activities been established and legitimized?
- How are these patterns continued in current governance processes?
- What can governance for sustainable development be supported?
- Focus on forestry, mining, oil and gas, fishing, reindeer husbandry and tourism; and relations to municipal planning

WPs

WP 1: The making of the European Arctic

- Relationship between governance structures, resource usage, and social change through time

WP 2: Governance in the present

- Construction of present governance in policy and law
- Contemporary trends in resource governance

WP 3: The changing global context

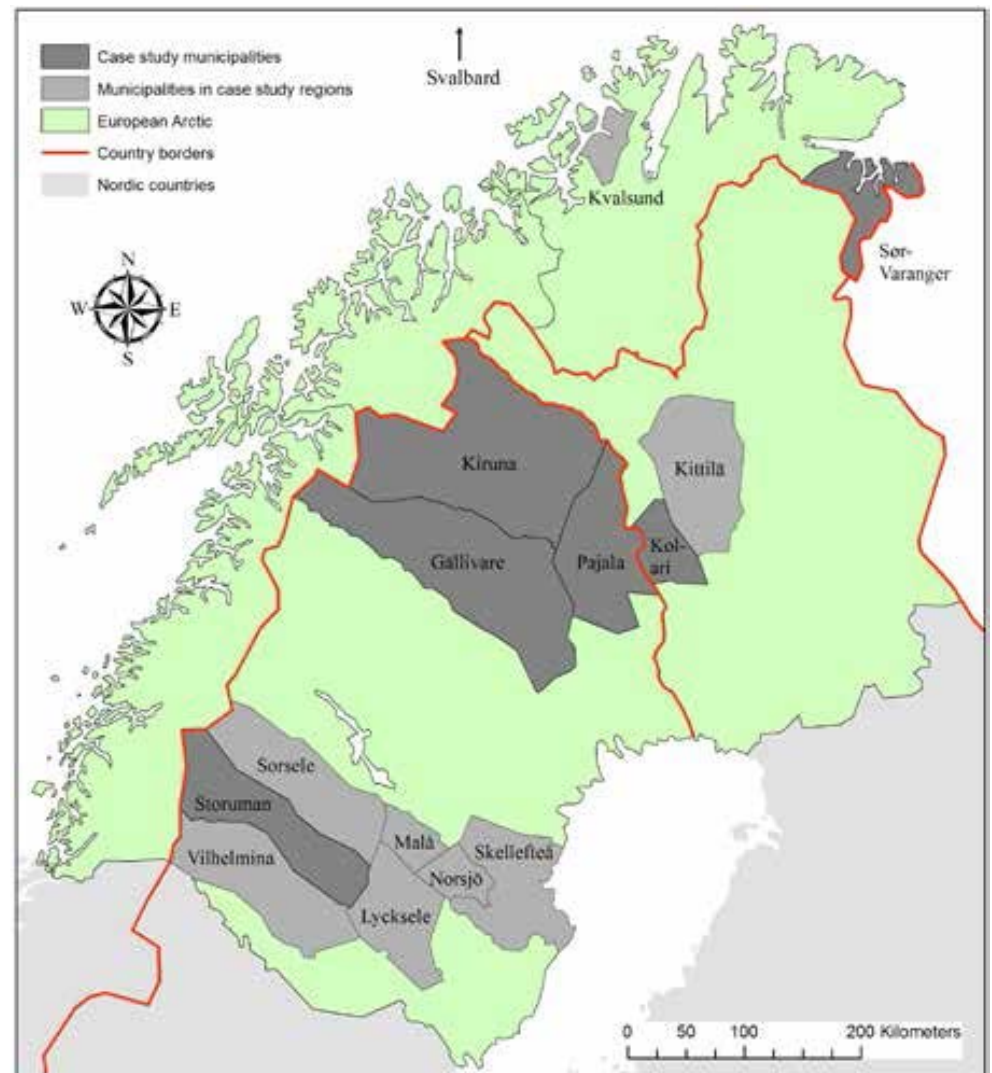
- Interactions between, environmental change, resource demand, the global economy, and geopolitical changes.
- *Scenario narratives of potential futures*

WP 4: Regional and local governance

- Synthesis of path dependencies and governance measures and impacts on local and regional level agency, incl. municipal planning

Case study areas

- Core: Sweden, Finland and Norway
- Outlooks to Russia and Svalbard



Scenarios in MASD WP 3

- Bringing together different knowledges
- Tool of communication and co-learning
- Basis for understanding governance challenges
- Pasts and futures
- Method in the making
 - Benefit from expert input from AACCA and SWIPA follow-up
 - Contributes analysis of geopolitics/security, resource flows, and potential of environmental accounting
- Workshop 1: March 2015 and Workshop 2: 2016



IMPRESSIONS aims to advance the understanding of consequences of high-end climate and socio-economic scenarios.

The project further aims to integrate such knowledge within European adaptation and mitigation decision-making.



Funded by the 7th Framework Programme of the European Union
Contract Number: 603416





Scenarios in IMPRESSIONS

IMPRESSIONS will

- In a stakeholder driven process develop integrated high-end scenarios;
- Apply the set of scenarios to a range of quantitative models in five case studies;
- Use the scenarios to assess possibilities for transformational change;
- Utilise the new RCP/SSP framework in the scenario process.

Options: Top down, bottom up, in between?

- **Top down or extended SSPs/RCPs:**
 - Use global scenarios (based on selected combinations of global SSPs and RCPs)
 - Workshop participants generate regional future scenarios within a set of given global contexts
 - Choice of sectoral or geographical focus
 - Choice of combinations sets of SSPs and RCPs that are interesting and relevant
 - Option of doing more than one regional future scenarios for each combination set to account for dynamics not included in the SSPs

Options: Top down, bottom up, in between?

- **Bottom up**

- Workshop participants define the most relevant drivers of change and uncertainties
- Most important drivers selected as basis for developing scenario narrative
- Consistency with global drivers, emission pathways and scenarios checked in Step 2
- Risk for local bias and blindness to important global drivers
- Possibility to explicitly introduce climate change knowledge into workshop process

Options: Top down, bottom up, in between?

- **In between**

- Regional climate change context generated from downscaling impacts on climate for different RCPs (expert input)

- Workshop participants generate regional SSPs

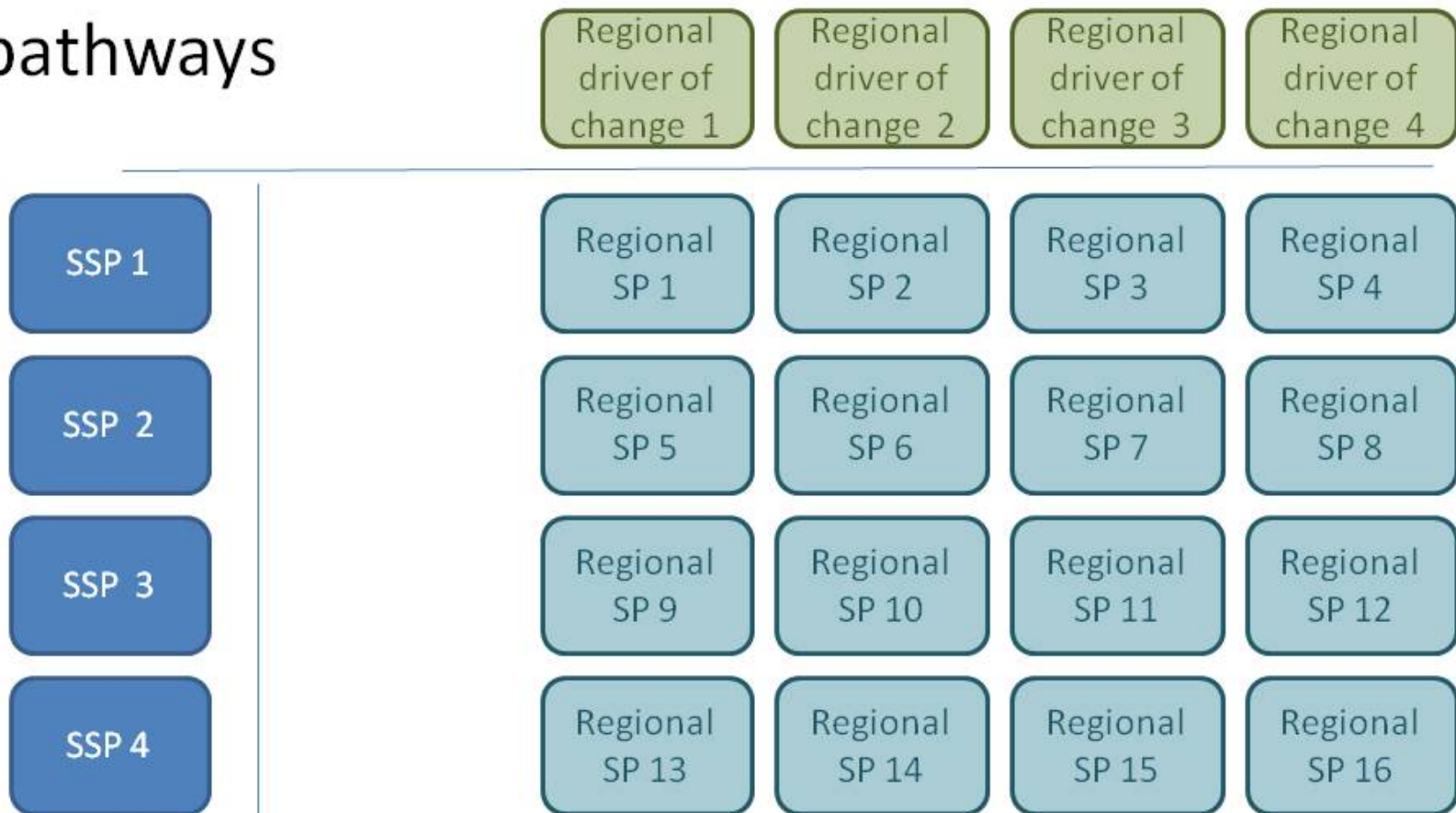
Two options:

1. Generated completely bottom up and later checked for consistency with global SSPs
2. Generated from a matrix where global SSPs are analyzed in relation to regional socio-economic drivers of change

In between option 2 step 1

Socio-economic pathways

Internal regional change dynamics



Global context

Regional socio-economic development pathways

Options: Top down, bottom up, in between?

- **In between**

- Regional climate change context generated from downscaling impacts on climate for different RCPs (expert input)

- Workshop participants generate regional SSPs

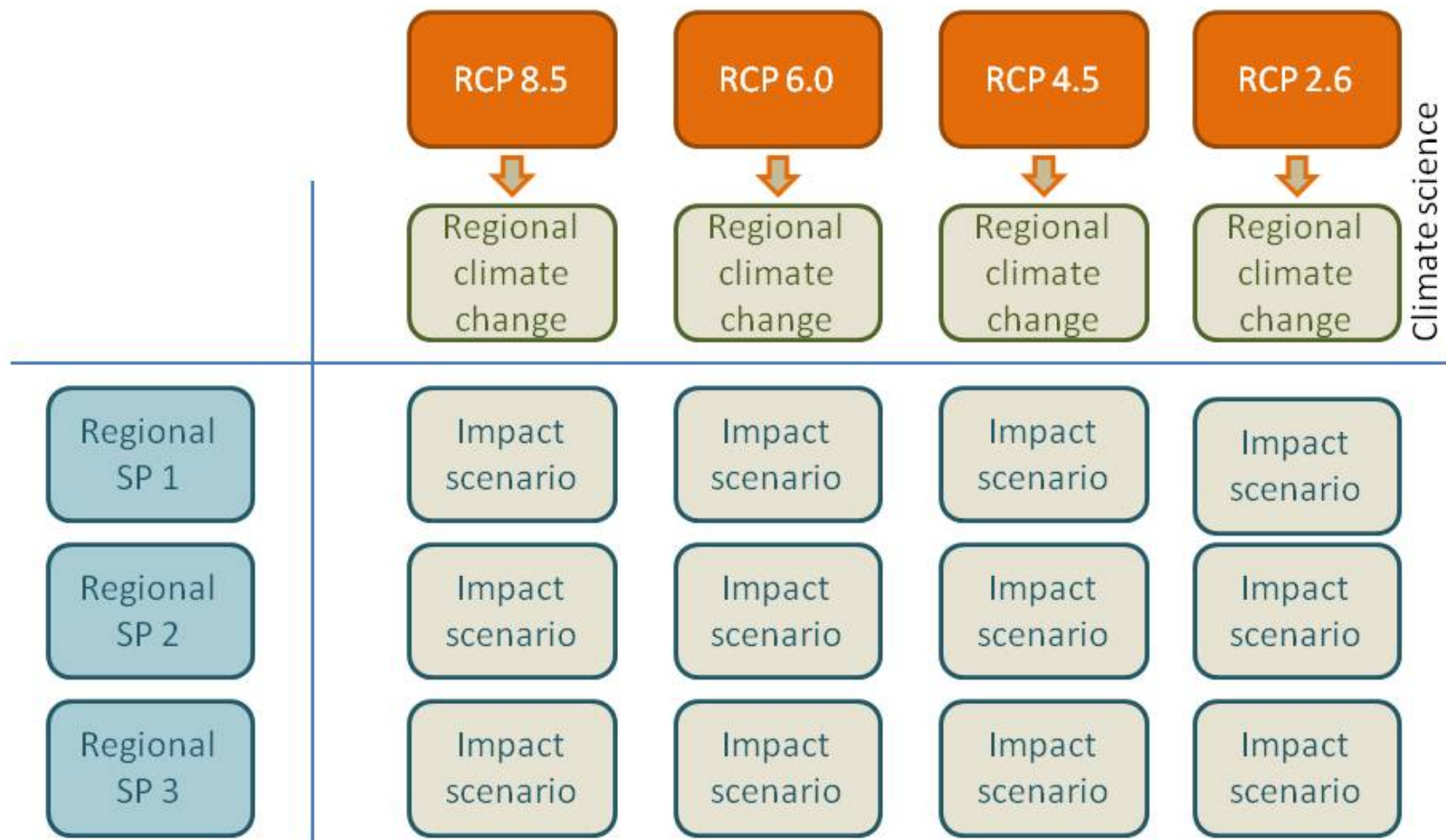
Two options:

1. Generated completely bottom up and later checked for consistency with global SSPs
2. Generated from a matrix where global SSPs are analyzed in relation to regional socio-economic drivers of change

- Step 2. Regional SSPs analyzed in different climate change contexts to generate a set of regional scenarios

In between version 2 step 2

Regional socio-economic pathways meet climate change



Issues and challenges

- Purpose of developing scenarios?
 - MASD: co-learning and analyzing governance
 - AACA: ?
 - AACA: Role scenarios chapter vs. scenarios in other chapters
- Adaptation *and* sustainable development
- Attention to threshold effects and extremes
 - High-end climate change and socio-economic pathways
- Choices of focus: sectoral or scale/subregions?
 - Which is most relevant for an "overall" picture"? Which is feasible?
 - Who is in the audience? Where are decisions made?
- Qualitative output
- Funding and logistics for workshop engagement

Post-doc position: Stockholm and Umeå

... the intended research will combine knowledge from the areas of environmental change, resource flows, globalization, and geopolitics and apply these to the Arctic context, particularly the European Arctic. It is envisaged that the researcher carry out research that supports the development of narratives as a base for further scientific discussion about different trends in the Arctic.

Application deadline is 30 May 2014.

http://www8.umu.se/umu/aktuellt/arkiv/lediga_tjanster/4-551-14.html

<http://www.arcum.umu.se/forskning/medel-att-soka/postdoc-position-arcum-sei/>

annika.nilsson @ sei-international.org
www.sei-international.org